**SENSITIVITY OF THE NORTH AMERICAN MONSOON TO SOIL MOISTURE AND VEGETATION, AND ITS TELECOMMUNICATION MECHANISMS IN TO THE U.S.: A MODELING STUDY**

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**Figures:**

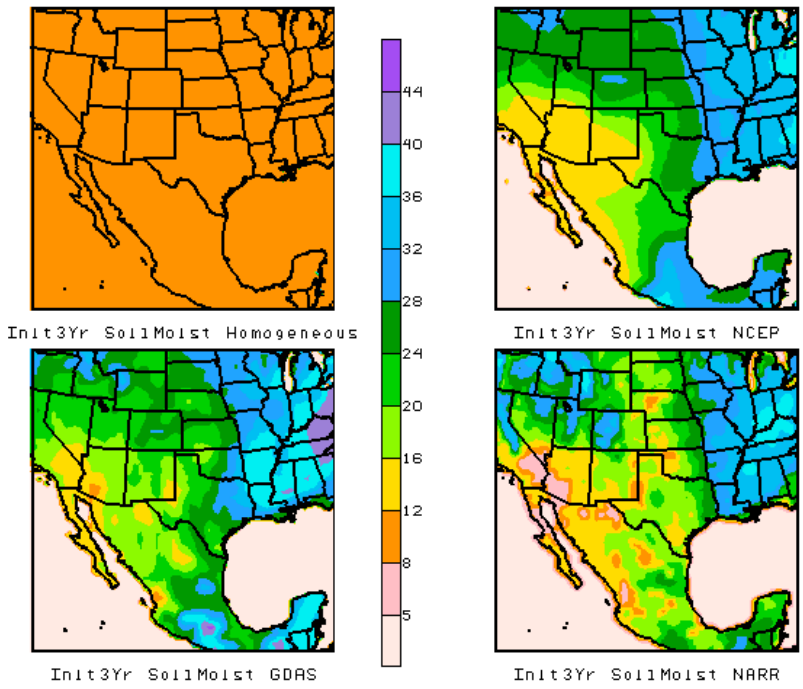


Figure 1: Initial multi-year averaged volumetric soil moisture fraction ($m^3/m^3$ x 100) from the following data sources: (a) homogeneous, (b) NCEP reanalysis, (c) FNL-GDAS, and (d) NARR.

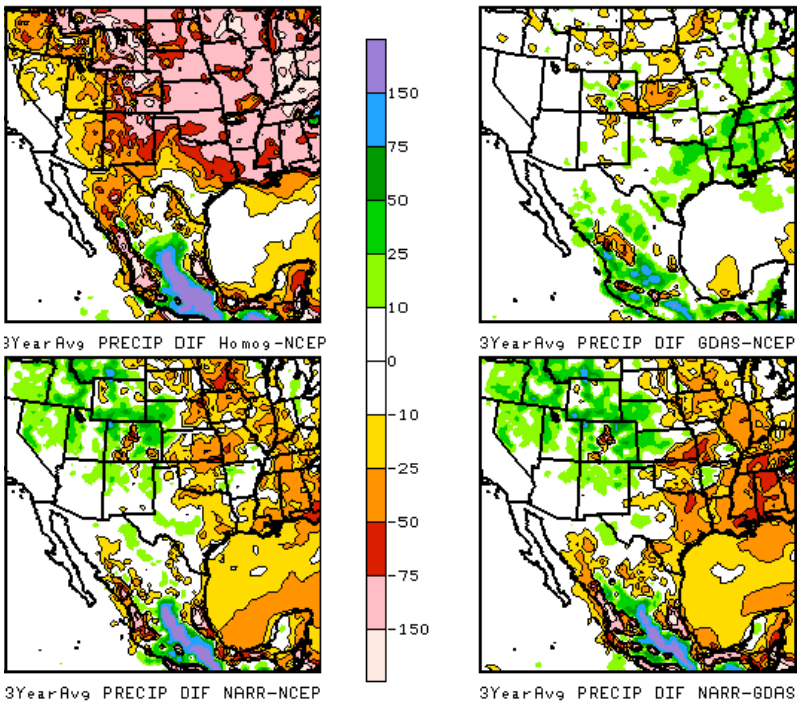


Figure 2: Three year average of the 90-day accumulated precipitation difference fields (mm) that compare the use of the various soil moisture data sets. Panel labels display which simulations are compared. For example, the lower, right panel is labeled with "NARR-GDAS", meaning the GDAS precipitation field was subtracted from the NARR simulations precipitation field.

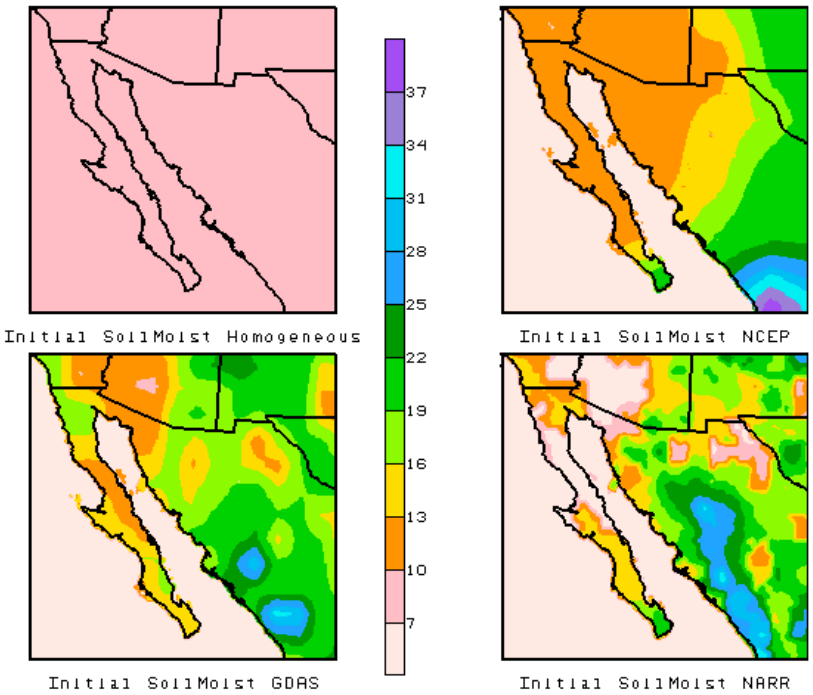


Figure 3: Initial 11 July 2004 monsoon surge volumetric soil moisture fraction ($m^3/m^3$ x 100) from the following data sources: (a) homogeneous, (b) NCEP reanalysis, (c) FNL-GDAS, and (d) NARR.

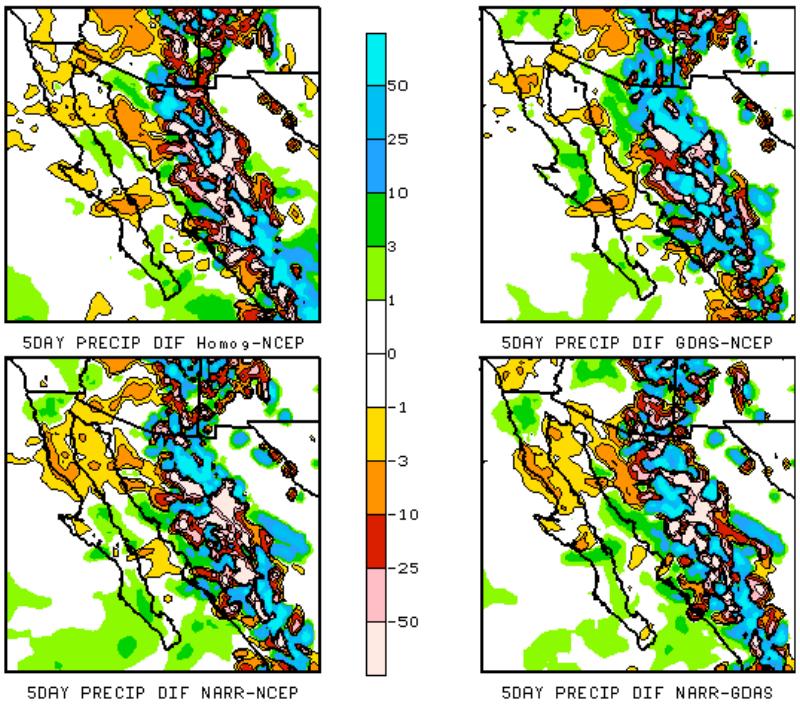


Figure 4: Similar precipitation difference field as in figure 2, except for the July 11-16, 2004 monsoon surge event on the nested 7km spacing grid.

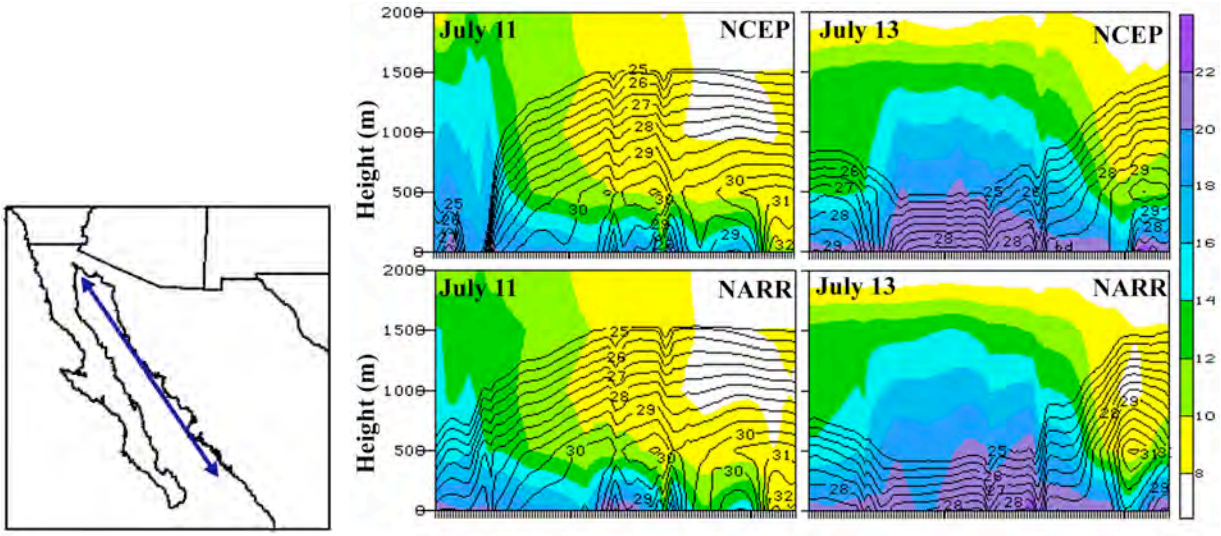


Figure 5: South to north Gulf of California cross-section of mixing ratio (shaded, g/kg) and temperature (contours, °C) during the gulf surge event from July 11-15, 2004. Panels are labeled with the date, and the NCEP (NARR) label denotes the data source for soil moisture initialization.